Date: User: Tuesday, 15/07/2008 4:12:14 PM

Julie Lecocq

# **Process Sheet**

Customer **Job Number**  : CU-DAR001 Dart Helicopters Services

: 40520 : 10429

**Estimate Number** 

P.O. Number

: 15/07/2008 This Issue Prsht Rev.

: NC

First Issue : 29924 **Previous Run** 

: //

Type

S.O. No. :

: MACHINED PARTS

**Part Number** 

**Drawing Name** 

: D3304043

**Drawing Number** 

. D3304 REV. B

: TUBE ASSEMBLY

Project Number **Drawing Revision** 

: N/A : B

Material

**Due Date** 

: 31/07/2008

Qty:

1 Um:

Each

Checked & Approved By

Written By Comment . . .

: Est: D 04.11.26

Revised Step 7

KJ/JLM

**Additional Product** 

Job Number:



Seq. #:

Machine Or Operation:

Description:

1.0

M304TR0875W065

SS TUBING

Comment: Qty:

Total: 1.9469 f(s) 1.9469 f(s)/Unit

Material: AISI 304/316 SS tubing 0.875" x 0.065" wall

(M304TR0.875W.065)

HARDINGE CNC LATHE SMALL

2.0 3 HARDINGE

Comment: HARDINGE CNC LATHE SMALL

- 1- Cut blank: 22.00" as per Dwg D3304
- 2- Turn as per Folio FA458 and Dwg D3304
- 3- Deburr

3.0

QC2

INSPECT PARTS AS THEY COME OFF MACHIN



4.0 QC8

Comment: INSPECT PARTS AS THEY COME OFF MACHINE



SECOND CHECK



Comment: SECOND CHECK

5.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Form as per Dwg D3304

Ensure that bend radius does not fall into straight section using DT8756.

2- Drill as per Dwg D3304 using drill Jig D3304-T1

3- Cut tube to length as per Dwg D3304

4- Deburr

# **Dart Aerospace Ltd**

W/O:			WORK ORDER CHANGES							
DATE	STEP	PRO		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		
Part No	:	PAR #:	Fault Category:	NCR:	Yes	No <b>DQ</b>	A:	_ Date: _	·	
					QA: I	N/C Close	d:	_ Date: _		

NCR:		WORK ORDER NON-CONFORMANCE (NCR)								
		Description of NC		Corrective Action Section B			A	A 1		
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector		
					·		i			

NOTE: Date & initial all entries

Tuesday, 15/07/2008 4:12:14 PM Date: User: 1 Julie Lecoca **Process Sheet** Customer: CU-DAR001 Dart Helicopters Services Drawing Name: TUBE ASSEMBLY Job Number: 40520 Part Number: D3304043 Job Number: Description: Sea. #: **Machine Or Operation:** INSPECT WORK TO CURRENT STEP QC5 6.0 Comment: INSPEC WORK TO CURRENT STEP D33047 Bracket 7.0 Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s) **Bracket** Pick: Qty Part Number Description D3304-7 Bracket LARGE FAB 1 8.0 Comment: LARGE FABRICATION RESOURCE 1 Weld bracket as per Dwg D3304 and QSI 004 using DT8775 VISUAL WELDING INSPECTION 9.0 QC9 08-08-01 Comment: VISUAL WELDING INSPECTION POWDER COATING POWDER COATING M 106442 Comment: POWDER COATING Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3 START TIME: **OVEN TEMPERATURE:** FINISH TIME: 11.0 QC3 Comment: INSPECT 12.0 BLBS0016 PIP PIN Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s) PIP PIN Pick: Description Qtv Part Number 19128 Pip Pin BLBS-0016 1

rospace	e Ltd									
		WC	RK ORDER CHANGE	S						
STEP	PROCEDURE CHANGE			Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		
,										
		G								
:	PAR #:	Fault Cate	Jory:	NCR: Yes	No DQ	A:	_ Date: _			
				QA: N	I/C Close	d:	_ Date: _			
		WORK ORDE	R NON-CONFORMAN	ICE (NCF	₹)					
CTED	Description of NC	ļ	Corrective Action Section B		Verific	cation	Approval	Approval		
SIEP	Section A	Initial Chief Eng	Action Description Chief Eng		Section C		& Section C		Chief Eng	QC Inspector
						1				
	STEP	:PAR #:	STEP PROCEDURE CHAIN  PAR #: Fault Cate  WORK ORDE  STEP Description of NC Section A Initial	WORK ORDER CHANGE  STEP PROCEDURE CHANGE  :PAR #:Fault Category:  WORK ORDER NON-CONFORMAN  WORK ORDER NON-CONFORMAN  STEP Description of NC	WORK ORDER CHANGES  STEP PROCEDURE CHANGE By  :PAR #:Fault Category:NCR: Yes  QA: N  WORK ORDER NON-CONFORMANCE (NCF  STEP Description of NC	STEP PROCEDURE CHANGE By Date  :PAR #:Fault Category:NCR: Yes No DQ. QA: N/C Close  WORK ORDER NON-CONFORMANCE (NCR)  STEP Description of NC Corrective Action Section B Section B Section A Section A Section Description Sign & Section B S	WORK ORDER CHANGES  STEP PROCEDURE CHANGE By Date Qty  :PAR #:Fault Category:NCR: Yes No DQA: QA: N/C Closed:  WORK ORDER NON-CONFORMANCE (NCR)  STEP Description of NC	STEP PROCEDURE CHANGE  By Date Qty Chief Eng / Prod Mgr  Chief Eng / Prod Mgr  The procedure Change By Date Qty Chief Eng / Prod Mgr  The procedure Change By Date Qty Chief Eng / Prod Mgr  The procedure Change By Date Qty Chief Eng / Prod Mgr  The procedure Change By Date Qty Chief Eng / Prod Mgr  The procedure Change By Date Qty Chief Eng / Prod Mgr  The procedure Change By Date Qty Chief Eng		

NOTE: Date & initial all entries

Tuesday, 15/07/2008 4:12:14 PM Date: User: Julie Lecocq **Process Sheet** Drawing Name: TUBE ASSEMBLY Customer: CU-DAR001 Dart Helicopters Services Job Number: 40520 Part Number: D3304043 Job Number: Seq. #: Description: **Machine Or Operation:** CBL460 Loop Sleeve 13.0 Total: 2.0000 Each(s) Comment: Qty.: 2.0000 Each(s)/Unit Loop Sleeve Pick: Description Qty Part Number 2 **CBL-460** Loop Sleeve CBL1240 14.0 Comment: Qty.: Total: 1.0416 f(s) 1.0416 f(s)/Unit Cable Pick: Qty Part Number Description 12.5" CBL-1240 Cable SMALL FAB 1 15.0 Comment: SMALL & MEDIUM FAB RESOURCE 1 Assemble lanyard and pip pin as per Dwg D3304 Identify as D3304-043 INSPECT WORK TO CURRENT STEP 16.0 QC5 Comment: INSPECT WORK TO CURRENT STEP PACKAGING RESOURCE #1 17.0 PACKAGING Comment: PACKAGING RESOURCE #1 Identify with P/N and B/N as per Dwg using a permanent fine point marker, then Stock Location: FINAL INSPECTION/W/O RELEASE 18.0 QC21



Comment: FINAL INSPECTION/W/O RELEASE

Dart Ae	rospace	Ltd							
W/O:			WC	ORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE			Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No	:	PAR #:	Fault Cate	gory: NC	R: Yes	No <b>DQ</b>	A:	Date: _	
					QA: N	I/C Close	d:	_ Date: _	•
NCR:			WORK ORD	ER NON-CONFORMANC	E (NCF	₹)			
		Description of NC		Corrective Action Section B		Verifi	cation	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign 8 Date	)	ction C	Chief Eng	QC Inspector
								· .	

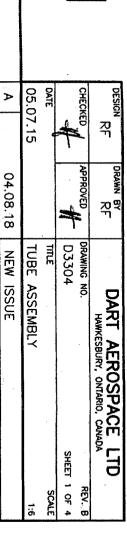
NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	<u>40520</u>
Description: Tube Assembly	Part Number:	D3304-3
Inspection Dwg: D3304 Rev: B		Page 1 of 1

Inspection Dwg:	: D3304 Rev	v: B			<u> </u>	Pa	ge 1 of 1
,	FIRS	T ARTICLE II	NSPECTI	ON CHE	ECKLIST		
		X First Arti	_		otype		
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method o		nments
9.25	+/-0.030	9 249 "	-				
Ø0.840	+/-0.010	\$ ,844"					
Ø0.875	+/-0.010	0.874	1				-
0.065	+/-0.010	1067"					
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Measured by:	7.F.	Audited by:	15		Prototype	Approval:	N/A
Date:	8/07/17	Date:	08/07	118		Date:	N/A
			//		· · · · · ·	Revised by	Approved
Rev         Date           A         04.09.08	Change New Issue	P/O D3304-	043/-044	<del></del>		KJ/JLM , A	Approved
B 06.03.09	Dwg Rev update		KJ/JLM a	- (11)			

Rev	Date	Change		Revised by	Approved
Α	04.09.08	New Issue	P/O D3304-043/-044	KJ/JLM	1
В	06.03.09	Dwg Rev updated		KJ/JLM 🚓	
	00.03.09	Dwg Nev apaated		1 110/0 = 111 5, 3	- Yu



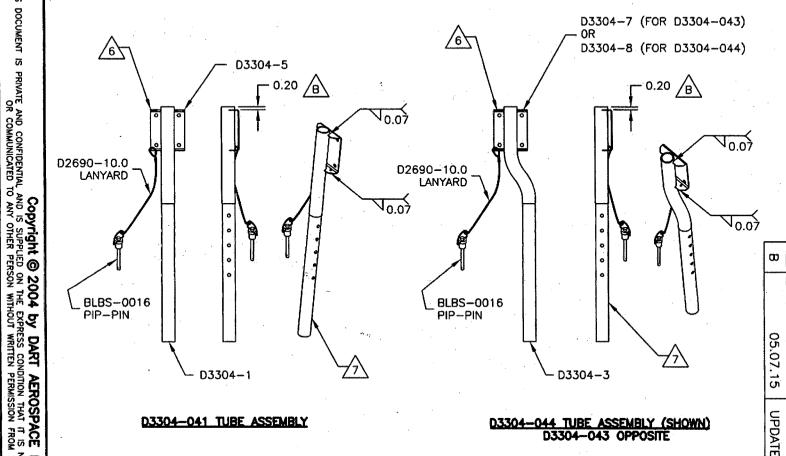


UPDATE

DIMENSIONS;

80

D3304-



D3304-041 TUBE ASSEMBLY

D3304-044 TUBE ASSEMBLY (SHOWN)
D3304-043 OPPOSITE

D3304-041/-043/-044 NOTES:

- 1) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 2) WELD PER DART QSI 004
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) IDENTIFY AS INDICATED USING FINE POINT PERMANENT INK MARKER "TCCA-PDA, DART
- AEROSPACE LTD, P/N D3304-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11" 7) IF BEING ASSEMBLED WITH D3303-041, ADD THE FOLLOWING USING A FINE POINT

PERMANENT INK MARKER: "TCCA-PDA, DART AEROSPACE LTD, P/N D412-724-XXX B/N BXXXXX. FOR PRODUCT ELIGIBILITY SEE PDA04-11"

UNCONTROL ENGINEE

LED COP

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DOCUMENT

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NOT TO BE USED IN DART AEROSPACE

58

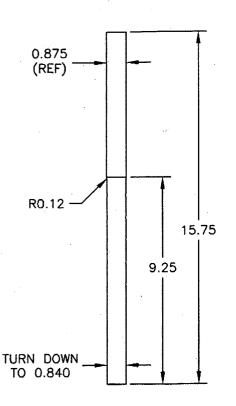
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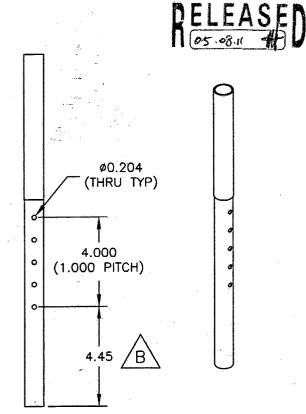
PURPOSE

AENDMEN1



DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
CHECKED ##	APPROVED	DRAWING NO.	REV. B		
一	#	D3304	SHEET 2 OF 4		
DATE		TITLE	SCALE		
05.07.15		TUBE ASSEMBLY	1:4		





### D3304-1 TUBE

SHOP COPY RETURN TO ENGINEERING

D3304-1 NOTES:

UNCONTROLLED COPY (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED WITHOUT NOTICE 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE Ø0.875 x 0.065 WALL

2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

WORK ORDER NO 4050

3) ALL DIMENSIONS ARE IN INCHES

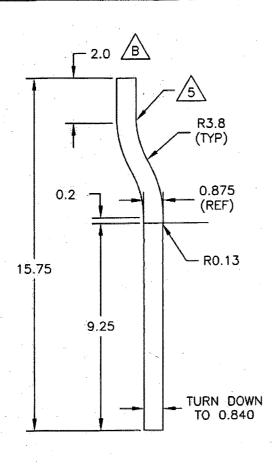
4) BREAK ALL SHARP EDGES 0.005 TO 0.015

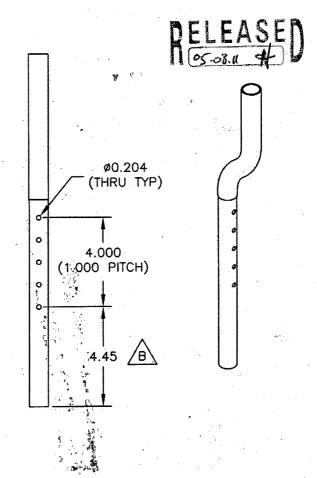
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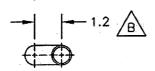
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DESIGN RF	DRAWN BY	DART AEROS HAWKESBURY, ONTO	
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-做	一世	D3304	SHEET 3 OF 4
DATE		TITLE	SCALE
05.07.15		TUBE ASSEMBLY	1:4







#### D3304-3 TUBE

D3304-3 NOTES:

(REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USENCONTROLLED COTY

2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

CUBIECT TO AMENDMENT

3) ALL DIMENSIONS ARE IN INCLES

3) ALL DIMENSIONS ARE IN INCHES

4) BREAK ALL SHARP EDGES 0.005 TO 0.015

5) BEND LINES 9.625, 13.375 DIMENSIONS

SHOP COPY RETURN TO ENGINEERUNG

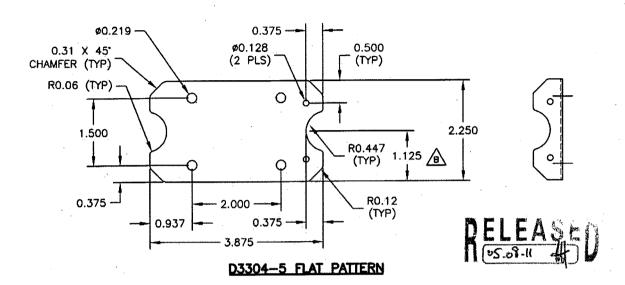
WITHOUT NOTICE

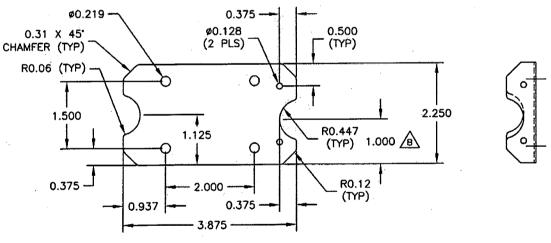
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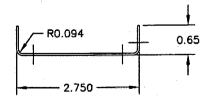


DESIGN RF	DRAWN BY RF	DART AEROS HAWKESBURY, ONT	
CHECKED	APPROVED ,	DRAWING NO	REV. B
#	1	D3304	SHEET 4 OF 4
DATE		TITLE	SCALE
05.07.15		TUBE ASSEMBLY	1:2





# D3304-7/-8 FLAT PATTERN



D3304-5/-7 BRACKET D3304-8 OPPOSITE SHOP COPY
RETURN TO
ENGINEERING

UNCONTROLLED COL SUBJECT TO AMENDMENT

WITHOUT NOTICE

WORK ORDER NO 46520

NOTES:

- 1) MATERIAL: AISI 304/316 SS 0.040 THICK SHEET (REF. DART SPEC M304S20GA)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

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